

Abstract

5           A high electrical and thermal performance thick film ceramic ball grid  
array package with a laser cut die cavity is presented. The thick film ceramic  
ball grid array package may have a thick film ceramic substrate with a first  
side and a second side with a heat spreader or a heat sink on the second  
side. An IC die may be attached to the heat spreader or heat sink through  
10 the laser cut die cavity and wire bonded to pads on the first side of the  
ceramic substrate. The thick film ceramic substrate may have one or more  
integrated passive components.